Care of the Eyes

METROPOLITAN LIFE INSURANCE COMPANY
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CARE OF THE EYES

OUR eyes are receiving sets for the great majority of impressions that come to us from the outside world. In order to enjoy life to the full and to do good work, we must give our eyes the special care they need.

The Eyes as Part of the Body

The eyes cannot be taken care of properly unless the whole body, of which they are a part, also is adequately cared for. Something which goes wrong in another part of the body may affect the eyes, and difficulty with the eyes may cause trouble elsewhere in the body.

Sight and Light

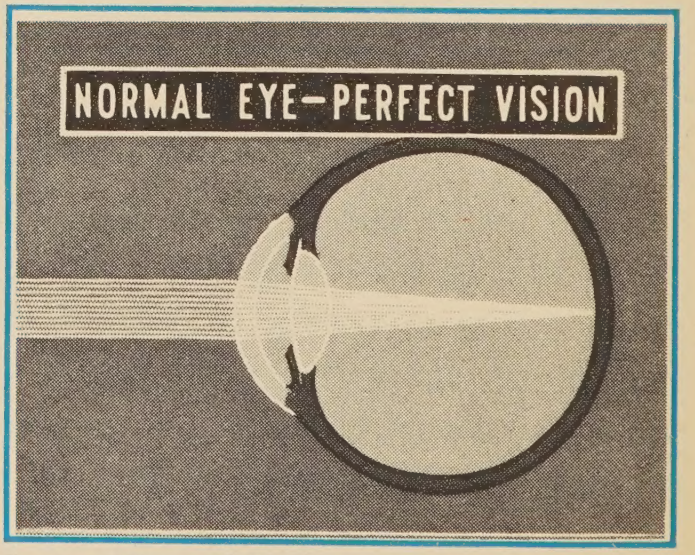
The eye is one of the most delicate as well as one of the most important organs of the body. Its function is vision. It is impossible to conceive of this function apart from light. If we shut out light, as we do when we close our eyes, we cannot see. If we are blind, light means nothing to us. Vision and light are inseparable.

How We See

Light rays strike an object and are thrown back. A person looking at the object receives these reflected light rays through the pupil of the eye. Just behind the pupil is the lens. This picks up the light rays and focuses them on a screen at the back of the eye called the retina. The

light rays set up chemical changes on the retina which makes the picture of the object. All that has happened so far is what an ordinary camera can do. The object has had its picture taken by the eye. Were it not for the brain we should have no more idea of what this picture looks like than has the camera of the picture *it* takes. The image of the object on the retina is sent to the brain by way of the optic nerve. It is the brain that "develops" the picture for us and tells us what it means. So actually we "see" with an organ which dwells always in the dark room of the skull.

In order to have perfect sight, light rays entering the eye must focus the image directly on the retina, as shown in Figure 1. In the normal adult eye the front curve of the eye, the curve of the lens, and the size of the eyeball are just right for focusing on the retina the image of an object 20 feet or more away. In looking at objects less than 20 feet distant and in using the eyes for close work, such as reading, writing, or sewing, a small muscle encircling the lens contracts and increases the front curve of the lens. The increase in the curve of the lens



Courtesy of Eastman Kodak Company

FIGURE 1

Normal Eye—Rays Focus Correctly on Retina

through the use of this muscle is called accommodation. When improper use of the eyes or a defect in the eye itself forces the muscles of accommodation to overwork, eye-strain results.

The Eyes at Work

For comfort and efficiency in seeing, it is important to have proper light for the work the eyes must do. To walk or talk in the dusk after the day's work is pleasant and restful, but dim or flickering light cannot be used for reading, writing, sewing, or other close work without straining the eyes. Sunlight and lamplight glaring into the eyes or reflected from such surfaces as glossy paper and tabletops are also harmful. Under a light of good intensity close work can usually be done more quickly and accurately. But the light must be well placed for eye comfort. If the room is dark except for a patch of light on the work, the eyes will be uncomfortable because they cannot adjust to both light and darkness at the same time. Light coming from above and slightly behind the chair cannot annoy the eyes. One must also be sure that the shadow of body or hand is not on the work. The book or work should be held about 14 inches away, as in normal eyes the muscles of accommodation can adjust the lenses for close work most easily at this distance.

It is not advisable to read lying down without special arrangements. For reading in bed the body should be propped up so that the relative position of the head, eyes, light, and book can be arranged as for reading in a chair. When sick or convalescing from an illness, the eyes

should be used only sparingly for reading or other close work, since the eyes themselves may be sick when the body of which they are a part is sick.

It is a mistake to keep on reading or doing other close work when the eyes feel tired. To look off into the distance now and then is a good way to rest the eyes when it is necessary to use them for a long time in work which puts a great strain on the muscles of accommodation.

The Eyes in Infancy and Childhood

EVEN before the birth of her baby a mother can do much to insure her child's health by placing herself under the care of a physician.

As soon as the baby is born, drops of a 1 percent solution of silver nitrate should be put in each eye in order to kill any germs which may have entered the eyes during birth. This treatment will in most cases prevent a disease called "baby's sore eyes", which causes a great deal of infant blindness. Every parent should make sure that the doctor or midwife or nurse in attendance has given this treatment to her newborn baby. In nearly all places it is required by law.

If a baby's eyelids become swollen and red, and a mattery discharge appears, call a doctor at once or take the baby to a hospital. Each hour's delay adds to the danger of blindness for life.

In giving a baby a sun bath and in placing him in his carriage or crib, great care should be taken to protect him from the glare of light shining directly in his eyes.

Little children must learn to use their eyes, just as they must learn to walk and talk. Their eyes, too, are still growing. During this period of eye development children should be guarded against the fatigue of too much close eye work.

Warnings of Eye Trouble

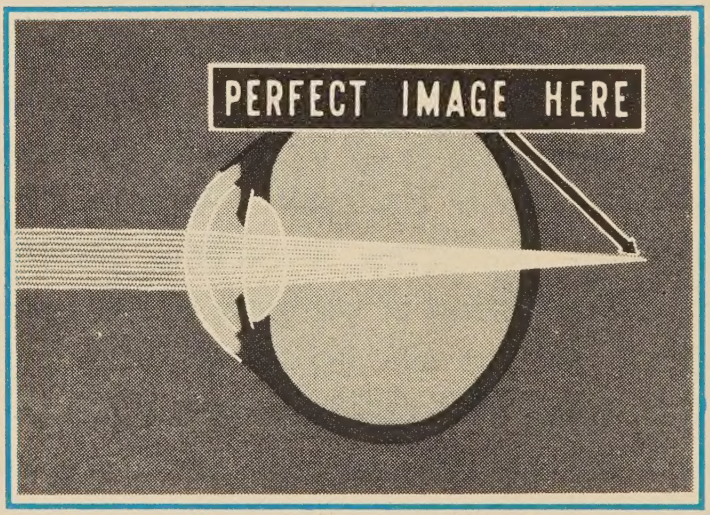
EYE trouble may be caused by an uncorrected defect in the structure of the eye, by disease either in the eye itself or in other parts of the body, by some deficiency in the diet, and by improper use of the eyes. Warnings to be heeded are persistent headaches, eyeaches, watery eyes, blurred vision, inflammation or soreness of the eyes or lids, dizziness, tired feelings on using the eyes, and swollen, puffy, or drooping eyelids. Persistent scowl, or a tendency to hold a book or handwork too close to or too far from the eyes, or any sort of inflammatory eye condition indicates that the eyes need attention.

The first step to take is to consult your physician. He will advise you as to whether the case should be treated by him or by a specialist in eye care. If you have no regular doctor, a clinic or hospital will tell you where you can get competent professional advice.

The Correction of Eye Defects

THE correction of defective eye conditions may improve the general health, relieve discomfort in using the eyes, and increase the working efficiency of the person concerned. Accidents and eyestrain which result from even slightly defective vision may also be avoided.

Eye trouble which is due to defects in the structure of the eye may often be remedied by wearing the proper glasses. Two common eye defects, *farsightedness* and *nearsightedness*, are illustrated in Figures II and IV. Figures III and V show how glasses make it possible for people with these defects to see clearly.



Courtesy of Eastman Kodak Company

FIGURE II

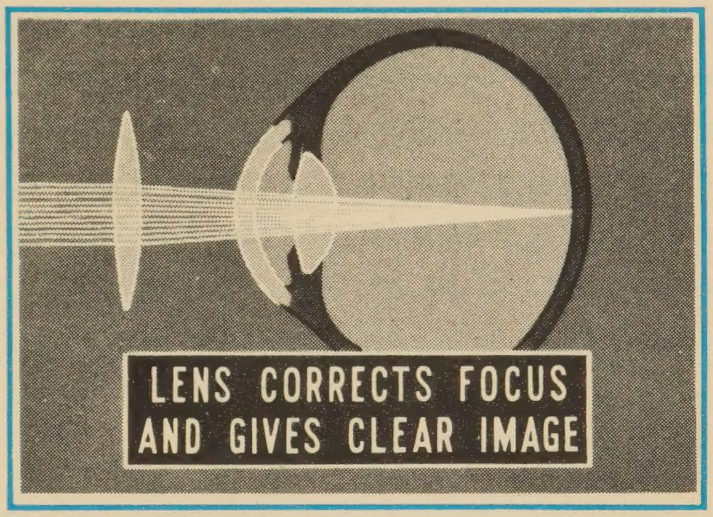
Farsighted Eye — Blurred Vision. In farsightedness the eyeball is too short from front to back, and light rays entering the eye focus the image *back* of the retina. Farsighted eyes cannot see objects near at hand without giving considerable extra work to the muscles of accommodation. This often results in eyestrain.

Astigmatism is another visual defect which may be counteracted by wearing glasses. In the astigmatic eye the curvature of the cornea, the window in the front part of the eye, or the curvature of the lens is irregular. Thus, light rays entering the eye cannot be brought to a common focus at any spot and a blurred image results.

Cross-Eyes. When a person does not get a clear image of an object simultaneously in both eyes, he often uses only the eye which gets the clearer image and suppresses the image in the other eye in order to avoid double vision. A person having this difficulty frequently becomes cross-eyed. In almost all instances the difficulty

FIGURE III

Farsighted eyes which have been fitted with convex lenses of suitable power can see near-by objects clearly without overworking the muscles of accommodation. Eye-strain from the defect of farsightedness is thus avoided.



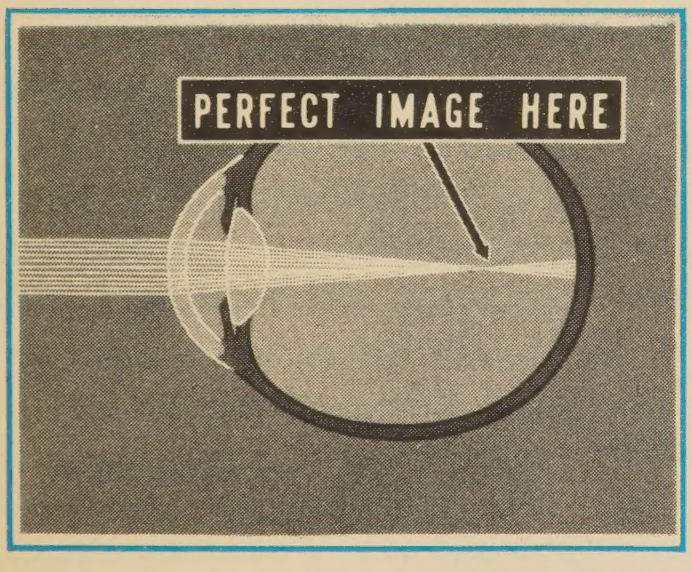
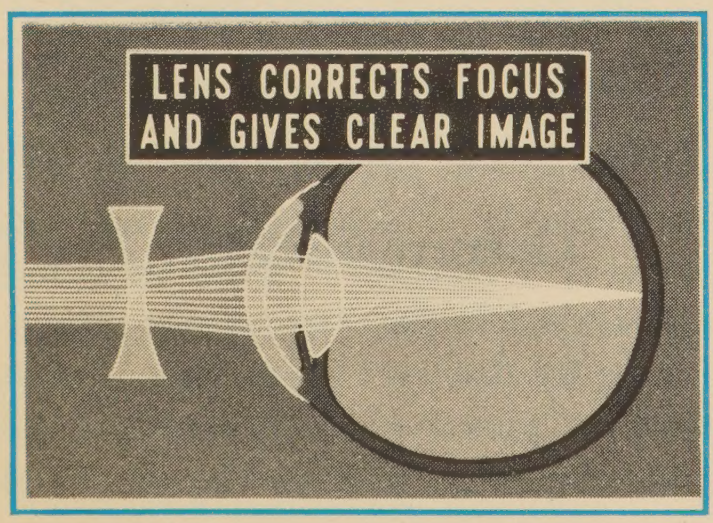


FIGURE IV

Nearsighted Eye—Blurred Vision. In nearsightedness the eyeball is too long from front to back, and light rays entering the eye focus the image in *front* of the retina instead of exactly upon it. Nearsighted people can see objects close at hand, but distant objects appear blurred.

FIGURE V

Nearsighted eyes which have been fitted with concave lenses of suitable power will be able to see distant objects clearly.



NOTE: Figures I, II, III, IV and V are reproduced from the film "Preventing Blindness and Saving Sight" through the courtesy of Teaching Films Division of Eastman Kodak Company.

is found early in childhood and should have medical care as soon as it is observed, as the vision in the eye that is crossed may become permanently damaged through lack of use. Sometimes the crossed eye may be straightened by placing a lens before the eye to improve its vision, but often, especially if the condition has existed for several years, it is necessary to train the eye to see and to work with its fellow eye, or to place the eye in proper position by an operation, or both.

The Hygiene of Wearing Glasses

THE fitting of glasses requires expert knowledge and great care. Lenses which are not exactly right or frames which do not hold the lenses in the proper position may cause great harm. Glasses should be cleaned frequently, and when not being worn should be kept in a case or at least placed so that the lenses do not come in contact with any surface which might scratch them.

Sometimes a person wears glasses long after the difficulty for which they were prescribed has been corrected, or after the eyes have changed so much that they need different assistance. The periodic reexamination of eyes for which glasses have been prescribed will indicate when the lenses need to be changed.

Communicable Eye Diseases

TROUBLE in the eyes may be caused by disease as well as by defects in structure. Some of these diseases, such as "pink eye"—inflammation of the eyelid lining—and trachoma, are caused by germs which can be passed

in various ways from one person to another. To escape communicable eye diseases it is essential that each person should form the habit of keeping the fingers and soiled handkerchiefs away from the eyes and of using only a clean individual washcloth and towel in washing the eyelids and around the eyes.

Inflamed or sore eyes should never be neglected. It is dangerous to try to treat them at home without a doctor's advice. If proper medical care is secured early enough, most forms of inflammatory eye disease can be cleared up without causing permanent damage to the eyesight.

The tears which are always flowing over the eyeball are nature's eyewash. In case of eye trouble, eyewashes, ointments, or other medication should be used only as recommended by a physician. After an eyewash prescribed by a doctor is no longer required, throw away what is left over. Do not save it to use again at some future date.

The Eyes in Mid-Life and Later

PEOPLE in middle life and beyond need to be careful not to add to the eye load when they begin to cut down on other activities. At this time natural physical changes in the eyes make it advisable to give the eyes extra rest rather than more work. A person of 40 or over who has always had good eyesight may note that he must push his book or newspaper further and further away in order to see the print clearly. Yet he can see as well as ever at arm's length and for a long distance

beyond. There is no need to worry over this condition. It is caused by a gradual lessening of elasticity in the lens of the eye so that the muscle of accommodation cannot readily reshape it for close vision. For this reason many people as they grow older need properly fitted glasses for reading and other close work.

Cataract

Another change in the lens of the eye which is found most often in persons of advancing age is cataract or "cloudy lens". Most old people have a little cloudiness of the lens, but that implies no particular harm. Thousands of people have a little cloudiness around the edges of the lens but with properly fitted glasses have good vision through the middle of it.

Although cataract is usually an eye difficulty of advancing age, it may be brought on at any time of life by illness or injury. All persons with cloudy lens should have a careful medical examination in order to find out whether it is caused by serious trouble other than change in the eye itself. By repeated examinations an eye physician will know whether the cataract is developing rapidly and if an operation is necessary to prevent blindness, or whether it is developing so slowly that no operation is advisable. If you or any persons for whose care you are responsible have cloudy vision consult your own doctor and the eye specialist he recommends, or ask advice from a clinic or hospital in your community.

Glaucoma

Another eye difficulty of mid-life or later is glaucoma, or hardening of the eyeball. This disease is more prevalent than it is commonly known to be, and its cause has not yet been discovered. In the chronic progressive form of glaucoma, side vision—the amount one sees "out of the corner of the eye"—is gradually lost first. Proper medical or surgical treatment given in time to such eyes may save the individual's vision. Otherwise total blindness is likely to be the outcome.

Eye Accidents

ALTHOUGH the eye is very delicate it is also well protected in the bony shelter in which it lies. The eyelids close automatically when anything threatens the eyes, and if a foreign body, such as a dust particle or a cinder, does lodge on the eyeball an increased flow of tears often succeeds in washing it off. These natural defenses of the eyes themselves must be backed up by ordinary precautions taken by each individual in order to avoid eye injuries. Workers in certain industries are exposed to flying dust, splinters, bits of steel or other fine particles thrown into the air. Protective devices used on machinery and the wearing of shatter-proof goggles for certain occupations have greatly decreased eye accidents from such causes.

Every individual may at some time or other get "something in the eye". When this happens it is important to remember that rubbing the eyeball is likely to make matters worse. To attempt to remove the bit of dust

or cinder with anything rough or unclean is extremely dangerous, as a serious eye infection may result. Give the tears a chance to wash it out and if, after a short time, this does not happen, go to a doctor or dispensary. If this is not possible, try to find someone trained in this form of first aid. Amateur attempts to remove a foreign body from the eye have sometimes seriously damaged the eyesight.

Fireworks and firearms, sharp-pointed objects, such as scissors, knives, and sticks, and toys of various kinds are responsible for many eye injuries in childhood. Parents should be strict censors of their little children's playthings and should "keep an eye" on their play activities. Older children should be taught how to use skillfully the tools they need for work or recreation.

To Save the Eyes for the Long Pull Through Life

For the Baby

Prenatal care of the mother.

Drops to prevent "baby's sore eyes."

For the Child

Special protection against eye fatigue.

An eye examination before entering school.

Training in the care of the eyes—how to avoid eyestrain, eye infections, and eye injuries.

For the Adult

Working conditions which conserve the eyesight—adequate and proper light, proper posture, protection from accident hazards.

For All Ages

A periodic health examination, including a check-up on the eyes.

The wearing of properly fitted glasses when necessary.

Prompt medical treatment for any sort of eye disease or injury.

Protection of the eyes from all possible sources of harm such as germs, the glare of bright lights, accidental injuries.

Healthful living in order to keep the whole body at its best.

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